Copernican revolution in astronomy achieved a better description of the movements of the planets. But Newton's theory of gravitation first gave an explanation of those movements. Every physical theory that postulates forces and energies is a causal theory; and the explanation of physical events in terms of forces and energies is a central feature of modern physics. Energies and forces are abstractions ; yet the law of conservation of energy was one" of the great triumphs of modern science. And it is in vain that the descriptive scientists pretend to repudiate the conceptions of force and energy. Without them physical science would have stagnated. The whole of our modern science of, and practical use of, electricity is the product of the endeavour not merely to describe accurately the fact that a rubbed glass-rod attracts pith-balls, but to find causal explanation of the fact.

Causes or causal influences are not phenomena; they are not in themselves directly revealed to our senses ; they are always theoretical interpretations or explanations of events. And the conception of forces and energies is the modern way of such explanation. If we ask, How do we come to conceive force and energy ? the answer is that we conceive force and energy only in virtue of the fact that each of us experiences the exertion of force and the expenditure of energy in the course of his own efforts to change the course of events.

The conception of cause is fundamentally anthropomorphic. If I insult you, and you give me a blow that sends me sprawling, you are the cause of my

downfall.
There can be little doubt that such experiences were the progenitors of all conception of causation ; man in action, striving to bring about a change, is the prototype of all causation. In consequence, we still tend to speak of
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